

Alternate Thirds Tuning System

Author: THONNI MENDES BRANDÃO

CPF: 220.272878-33

RG: 29.554.023-0 – SP/SSP

Creation Date: 2025

Registration Date: February 2, 2026

1. System Description

This document registers an original tuning system for string instruments (guitalele, 7-string acoustic guitar, and 7-string electric guitar), developed by the author with the aim of facilitating access to rich and colorful harmonies, especially chords with extensions (ninths, sixths, sevenths, thirteenths).

The system is based on alternating minor and major third intervals on the instrument's higher strings, creating expanded harmonic possibilities with ergonomic fingerings.

2. Fundamental Principles

2.1 General Structure

High Strings (4 on the guitalele, 5 on the 7-string guitar):

- Tuned in alternating minor and major thirds.
- Facilitate harmonic tensions (9ths, 6ths, 7ths, 13ths).
- Create compact and accessible voicings.

Low Strings (2 on 7-string instruments):

- Tritone interval between them.
- Structural bass/pedal function.
- One-octave separation relative to the high string set to avoid harmonic "muddiness" in the middle registers.

2.2 Harmonic Logic

The choice of alternating thirds allows for:

- Rapid access to major and minor triads.

- Natural incorporation of tensions without large fret jumps.
- Maintenance of consonance in middle registers.
- Open voicings characteristic of Jazz and MPB (Brazilian Popular Music).

The tritone on the low strings provides:

- Functional basses with tension.
- Facilitated chromatic movement.
- Stable harmonic foundation separated from extensions.

3. Specific Tunings

3.1 Guitalele (6 strings)

From the highest string to the lowest:

1. **G** - 1st string (highest)
2. **E** - 2nd string
3. **C** - 3rd string
4. **A** - 4th string
5. **A** - 5th string (one octave below the 4th)
6. **E_b** - 6th string (lowest)

Intervals:

- G → E: Minor third (3 semitones)
- E → C: Major third (4 semitones)
- C → A: Major third (4 semitones)
- A → A (8vb): Octave (12 semitones)
- A → E_b: Tritone (6 semitones)

Reference: The A on the 5th string corresponds to the "A" note of the open 5th string in standard guitar tuning.

3.2 7-String Acoustic and Electric Guitar

Structure:

- **5 highest strings:** Tuned in alternating minor and major thirds.

- **2 lowest strings:** Tuned in a tritone, for structural basses.

(Specific tunings may vary according to the musician's preferred working key).

4. Practical Chord Examples

All examples follow the notation: numbers indicate frets (0 = open string, X = muted string), from the highest string to the lowest.

4.1 G6 Chord (G Major with Sixth)

Fingering: 0 (G) 0 (E) 2 (D) 2 (B) X (muted) 4 (G)

Notes: G (root), B (major third), D (perfect fifth), E (major sixth), G (root octave). **Characteristic:** Open and clean voicing, typical of indie/alternative sonorities.

4.2 G6/9 Chord (G Major with Sixth and Ninth)

Fingering: 4 (B) 5 (A) 4 (E) 5 (D) X (muted) 4 (G)

Notes: G (root), D (fifth), E (sixth), A (ninth), B (third). **Characteristic:** Rich and colorful harmony, easily accessible. Characteristic sound of Bossa Nova and Jazz.

4.3 Gmaj9 Chord (G Major with Major Seventh and Ninth)

Fingering: 2 (A) 2 (F#) 2 (D) 2 (B) X (muted) 4 (G)

Notes: G (root), B (third), D (fifth), F# (major seventh), A (ninth). **Characteristic:** Symmetrical voicing (all strings on fret 2), ergonomic and easy to memorize.

4.4 Gmaj13 Chord (G Major with Major Seventh, Ninth, and Thirteenth)

Fingering: 4 (B) 5 (A) 6 (F#) 7 (E) X (muted) 4 (G)

Notes: G (root), E (sixth/13th), F# (major seventh), A (ninth), B (third). **Characteristic:** Highly colorful chord, typical of MPB and contemporary Brazilian Jazz.

4.5 E7(#9) Chord (E Dominant with Sharp Ninth)

Fingering: 1 (G#) 3 (G) 2 (D) 2 (B) X (muted) 1 (E)

Notes: E (root), B (fifth), D (minor seventh), G (sharp ninth), G# (major third). **Characteristic:** The chromatic clash between G and G# creates the tension characteristic of the "Hendrix chord." Blues/rock sonority with harmonic sophistication.

4.6 Am9 Chord (A Minor with Ninth)

Fingering: 5 (C) 7 (B) 7 (G) 7 (E) X (muted) 6 (A)

Notes: A (root), E (fifth), G (minor seventh), B (ninth), C (minor third). **Characteristic:** Complete and dense voicing, ideal for jazz contexts and modal progressions.

4.7 D7(13,9) Chord (D Dominant with Thirteenth and Ninth)

Fingering: 4 (B) 0 (E) 6 (F#) 3 (C) 5 (D) X (muted)

Notes: D (root), C (minor seventh), F# (major third), E (ninth), B (13th). **Characteristic:** Intelligent use of the open string (E) as the ninth, facilitating fingering. Rich dominant chord, suitable for expressive resolutions.

5. Example Harmonic Progression

Gmaj13 → E7(#9) → Am9 → D7(13,9) → Gmaj13

This progression demonstrates the system's capabilities:

- All chords kept in a close region of the neck (efficient voice leading).
 - Harmonic richness without complex fingerings.
 - Sonority characteristic of Jazz/Bossa Nova/Indie Alternative.
 - Clearly defined tensions and resolutions.
-

6. System Advantages

1. **Ergonomics:** Chords with multiple extensions accessible with compact fingerings.
2. **Harmonic Color:** Facilitates tensions (9ths, 6ths, 7ths, 13ths) that enrich the harmony.
3. **Voice Leading:** Smooth transitions between chords due to note proximity.

4. **Timbral Separation:** Structural basses separated from high harmonies avoid sonic "muddiness."
 5. **Stylistic Versatility:** Suitable for Jazz, MPB, Bossa Nova, Indie, and Alternative Rock.
-

7. Declaration of Authorship

I, THONNI MENDES BRANDÃO, declare myself to be the original author of this tuning system, developed in 2024 through practical experimentation and reflection on principles of functional harmony and instrumental ergonomics.

This document serves as a public record of the creation and theoretical foundations of the system, establishing priority of authorship.

Digital Signature: THONNI MENDES BRANDÃO

Date: February 2, 2026

Location: Brazil

8. Certified Digital Signature

This document will be digitally signed by the author with a valid digital certificate.

The certified digital signature guarantees:

- **Authenticity:** Unequivocal confirmation that the document was created by THONNI.
- **Integrity:** Any subsequent alteration to the document will invalidate the signature.
- **Non-repudiation:** The author cannot deny authorship of the signed document.
- **Legal Validity:** Digital signature possesses legal validity equivalent to a handwritten signature under Brazilian legislation (MP 2.200-2/2001 and Law 14.063/2020).
- **Timestamp:** Exact date and time of the signature, proving priority.

Verification of the digital signature can be performed through software compatible with ICP-Brasil certificates or PDF viewers that support digital signature validation.

9. Final Notes

This system remains under continuous development. New fingerings, progressions, and practical applications are being explored by the author. Future updates to this document may include:

- Specific tunings for different working keys.
- Expanded library of voicings.
- Analyses of application in different musical contexts.
- Transcriptions of original pieces using the system.

Contact and Rights: All rights to this system belong to the author. Use, adaptation, or dissemination must cite the original source.

END OF DOCUMENT Version for Certified Digital Signature""", title="Alternate Thirds Tuning System - Thonni Mendes Brandão"))